

**IN THE UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF VIRGINIA
ROANOKE DIVISION**

**JEFFREY S. HODGES,
TOMMY LEE BONDS, and
JOHN PAUL SPANGLER,**

Plaintiffs,

V.

FEDERAL-MOGUL CORPORATION, et al.,

Defendants.

CASE NO. 7:12-cv-00362-MFU

PLAINTIFFS' MEMORANDUM IN OPPOSITION TO
DEFENDANTS' MOTION TO EXCLUDE EXPERT TESTIMONY

The plaintiffs, Jeffrey S. Hodges, Tommy Lee Bonds, and John Paul Spangler, by counsel, file Plaintiffs’ Memorandum in Opposition to Motions of the Defendants’ Federal Mogul Corporation (“F-M”), Dustex Corporation (“Dustex”), and Q-Tech of the Carolina’s, LLC. (“Carrington”) to exclude the testimony of the plaintiffs’ expert witnesses, and respectfully request that the Motions of the Defendants’ be denied.

STATEMENT OF THE CASE

By these Motions the Defendants seek to prevent the Plaintiffs from presenting expert testimony at the trial of this case by Patrick J. McGinley, an extremely well-qualified expert in the field of fire science and investigation, and by Martin Schloss, P.E., an extremely well-qualified expert in the field of industrial ventilation and dust collection. The testimony of Mr. McGinley primarily addresses the origin of the explosion which occurred on December 31, 2010 at F-M's Blacksburg plant causing the severe burn injuries to the Plaintiffs' which is a subject matter of this

case. The testimony of Mr. Schloss primarily focuses upon the industry safety standards which applied to all Defendants in their conduct from the date of the installation of the aluminum dust collection equipment in 2002 – 2003 and applied up until the date of the explosion on December 31, 2010. In addition, due to his extensive experience in designing and manufacturing dust collectors, i.e. baghouses, and in investigating and mitigating dust explosions, Mr. Schloss also was asked to opine on the origin of the explosion at the Blacksburg plant and its potential cause.

As is recognized by industry safety standards of the National Fire Protection Association, it is not a question of **if** an explosion will occur at a baghouse, but is a question of **when**. Further, NFPA standards state that seldom can one determine the precise ignition source of the explosion occurring within a baghouse:

Industry experience has clearly demonstrated that **an eventual explosion can be expected** where a bag or media-type collector is used to collect aluminum fines. **Seldom, if ever, can the source of the ignition be positively identified.**

See, NFPA 651, Appendix C A-2-5.1, which is Exhibit B to Affidavit of Martin Schloss P.E. (**Ex. 18**,), and also see **Ex 13, p. 171**.

Accordingly, industry safety standards require protective devices between the baghouse and the interior of the plant to protect people and property in the plant. Since the Plaintiffs' claims in this case primarily relate to defects in these protective devices, including explosive venting on the baghouse and a back-blast damper located exterior to the plant that should have prevented an explosion originating in the baghouse from entering the plant, it is not necessary that the precise cause of the ignition in the baghouse be determined. Therefore, with regard to the "cause" issue, i.e. the ignition source within the baghouse, the Plaintiffs' will limit the presentation of the expert testimony to identify conditions existing in the baghouse at the time of the explosion

that might have served as a source of ignition. However, Plaintiffs will also rely on the industry safety standards that require these safety devices, **without regard to knowing the ignition source in the baghouse** which (according to industry safety standards) “**seldom if ever can be positively identified**”. Testimony regarding the origin of the explosion of the baghouse will be supported by eyewitness testimony, contemporaneous video surveillance, compelling physical evidence regarding damage to the baghouse vs. damage to the ducts, and well-founded expert testimony as hereinafter addressed.

The record demonstrates in this case that it would be error to exclude the testimony of the plaintiffs’ expert witnesses, and accordingly the Defendants’ Motions should be denied.

LEGAL STANDARDS

Federal Rule of Evidence 702 addresses the admissibility of expert testimony:

Rule 702. Testimony by Expert Witnesses

A witness who is qualified as an expert by knowledge, skill, experience, training, or education may testify in the form of an opinion or otherwise if:

- (a) the expert’s scientific, technical, or other specialized knowledge will help the trier of fact to understand the evidence or to determine a fact in issue;
- (b) the testimony is based on sufficient facts or data;
- (c) the testimony is the product of reliable principles and methods; and
- (d) the expert has reliably applied the principles and methods to the facts of the case.

In applying Rule 702, the Fourth Circuit has said:

The inquiry to be undertaken by the district court is “a flexible one” focusing on the “principles and methodology” employed by the expert, not on the conclusions reached. *Daubert*, 509 U.S. at 594-95. In making its initial determination of whether proffered testimony is sufficiently reliable, the court has broad latitude to consider whatever factors bearing on validity that the court finds to be useful; the particular factors will depend upon the unique circumstances of the expert testimony involved. *See Kumho Tire Co.*, 119 S. Ct. at 1175-76. The court, however, should be conscious of two guiding, and sometimes competing, principles. On the one hand, the court should be mindful that Rule 702 was intended to liberalize the introduction of relevant expert evidence. *See Cavallo v.*

Star Enter., 100 F.3d 1150, 1158-59 (4th Cir. 1996). And, the court need not determine that the expert testimony a litigant seeks to offer into evidence is irrefutable or certainly correct. *See id.* As with all other admissible evidence, expert testimony is subject to being tested by “vigorous cross-examination, presentation of contrary evidence, and careful instruction on the burden of proof.” *Daubert*, 509 U.S. at 596. On the other hand, the court must recognize that due to the difficulty of evaluating their testimony, expert witnesses have the potential to “be both powerful and quite misleading.” *Id.* at 595 (internal quotation marks omitted). And, given the potential persuasiveness of expert testimony, proffered evidence that has a greater potential to mislead than to enlighten should be excluded. *See United States v. Dorsey*, 45 F.3d 809, 815-16 (4th Cir. 1995).

Westberry v. Gislaved Gummi AB, 178 F.3d 257, (4th Cir. 1999).

ARGUMENT

I. BOTH OF THE PLAINTIFFS’ EXPERT WITNESSES ARE EXTREMELY WELL-QUALIFIED TO PROVIDE EXPERT TESTIMONY ON THE CRUCIAL ISSUES OF THIS CASE.

A. QUALIFICATONS OF PATRICK J. MCGINLEY

Mr. McGinley entered the Philadelphia Fire Department as a firefighter in 1964, and obtained an Associate’s Degree in Fire Science in 1976. He was promoted to Lieutenant, then Captain and became a Battalion Chief. In 1978 he became a Deputy Chief of the Philadelphia Fire Department. While a Lieutenant and Captain he was assigned to the Fire Marshall’s office where his full-time duties were fire investigation and inspection. In 1980 he was selected to serve as the Chief Fire Marshall for the City of Philadelphia where he ran the fire investigative entity for the City of Philadelphia. He has been a member of the National Fire Protection Association since 1980 and has served on their committees, as well as a committee for the American Society of Testing materials for ASTM. Mr. McGinley served on NFPA 1033 committee. It should be noted that NFPA 921 is an offshoot of NFPA 1033, which is the Fire Investigator Qualifications Committee. Sixty to sixty-five percent of the current work of his company is for insurance

carriers. Mr. McGinley himself currently investigates fires when products are accused of being responsible for an event. **Ex. 13, p. 21.**

B. QUALIFICATIONS OF EXPERT MARTIN SCHLOSS, P.E.

Martin Schloss is a professional engineer, holding a license from Virginia as well as numerous other states. He has extensive experience addressing combustible dust, baghouse explosions and has been responsible for the designing and manufacturing of hundreds of baghouses as well as other conveyance equipment, some of which were specifically designed and manufactured for removal of aluminum dust:

I have spent the last thirty-three years of my professional life designing, specifying and evaluating industrial ventilation systems to include the safe management of combustible industrial dust such as aluminum dust. I teach industrial ventilation, including combustible dust mitigations, at Michigan State University, sponsored by the Michigan Industrial Ventilation Conference from time to time and in Raleigh, North Carolina, sponsored by the North Carolina Industrial Ventilation Conference from time to time. I am very familiar with the requirements for industrial dust, including aluminum dust mitigation and I provide consulting services to professionals and industry as part of my everyday work. As a professional engineer addressing combustible dust, I have conducted post-dust explosion mitigation analysis of a number of explosions, including baghouse explosions which have included analysis of cause and origin to address subsequent mediation. I have designed and was responsible for the manufacturer of hundreds of baghouses as well as conveyance equipment for combustible dust systems. Some of these systems were specifically designed and manufactured for removal of aluminum dust. Many of these systems were sold through manufacturing representatives.

Ex. 16, p. 1-2.

II. BOTH EXPERTS UTILIZED APPROPRIATE METHODOLOGIES IN PERFORMING THEIR INVESTIGATIONS.

A. METHODOLOGY OF PATRICK J. MCGINLEY

NFPA 921 “Guide for Fire and Explosion Investigations” is recognized as a peer reviewed and generally accepted standard in the fire investigation community. *See Travelers Prop. & Cas.*

Corp. v. Gen. Elec. Co., 150 F.Supp.2d 360, 366 (D. Conn. 2001). Accordingly, this is what Mr. McGinley used to guide his investigation.

Q. Which committees for the NFPA?

A. For NFPA I was on 921 initially, which was an offshoot of NFPA 1033, which is Fire Investigator Qualifications Committee. And I sat on that committee for a couple of years. And that led to 921.

Q. And as a former committee member of 921, do you agree that your fire investigation, your cause and origin investigation, in this incident is governed by NFPA 921?

A. I certainly followed the recommendations of NFPA 921, as I mentioned in my report.

Ex. 13, p. 10.

Although Defendants vigorously fault Mr. McGinley's and Mr. Schloss' evaluation of Mr. Hodges testimony, such evaluation was exactly what is required by NFPA 921.

Q. Under NFPA 921 how do you evaluate, just on a general basis, how do you evaluate witness testimony?

A. Witness testimony is a critical part of the data gathering process. NFPA 921 dictates specifically that the scientific method be utilized. Scientific method is simply explained as a multi-step but pretty simple process whereby you identify the problem, that the fire and/or explosion occurred. You then gather the data. And the gathering of the data process not only includes documentation and litigation-generated documents, etcetera, plus reports and photographs, etcetera, but information received from witnesses.

That goes into the data gathering step in the scientific method. Then you, as an investigator, evaluate that data. You examine it carefully and understand what data you have accumulated. Then you formulate an opinion based on the accumulated data. Then you test that hypothesis, your opinion, against the data. And if it holds up, then that's your hypothesis, your conclusion or your opinion.

If you find when you test it against the data that it does not hold up, it is inconsistent with the data, then you go back to square one, start all over again reviewing the data. Witness statements are an important part of the data gathering process. In many fires witness statements are the only thing you get to go on.

I mean, you arrive at the scene of a fire where a four-story building is in the basement. It's real nice to know that the lady in the third floor apartment says she was cooking such-and-such and the pan caught fire and she ran out the door. By the time the investigator gets there, the building is down in the basement.

The only way you're going to find out that it started on the third floor is to utilize such things as witness statements. So they are an intricate part of the data gathering process. Keeping in mind that they are part of the data-gathering process, and that the witness's statement and any witness statement, and I have been interviewing people for 50 years, any witness statement is what it is. And it has to test against the physical evidence, depending on the level of credibility that is given to it.

And that's what you do with statements, you know, listen to what everybody has to say and then find out whether or not the rest of the physical data, etcetera, fits that and give it the significance or the weight that it deserves. And I think every investigator worth their salt does that.

Ex. 13, p. 38-40.

Defendants even attack Mr. McGinley's and Mr. Schloss' evaluation of Mr. Hodges evidence as part of the scientific method calling it "self-serving." Mr. McGinley correctly reminded the questioner of the investigator's role:

Q. - - on an investigation? Do you believe that self-serving testimony should be accorded the same amount of weight as testimony that does not necessarily serve the maker of the testimony?

A. I believe that an investigator has an obligation to listen to the testimony and to compare it to the facts and the physical evidence, etcetera. And whether or not it's self-serving is not the investigator's function; his function is to seek the truth. People can make very, very honest self-serving statements. So investigators really shouldn't get into that.

They should listen to the statement. They should look at the evidence. If the statement is consistent with the evidence, you go with it. And I don't care if it's self-serving or not. Self-serving nature of it has nothing to do with your investigation.

Q. So you don't think there is any additional level of critical review that needs to occur when it's a self-serving statement?

A. No, I don't think so. I think you review all of the data. That's what NFPA 921

demands, review of all the data. But if you reviewed all of the data, whether the statement is self-serving or self-deprecating, becomes immaterial because you're reviewing the same data for the same statement.

Ex. 13, p. 117-118.

In accordance with the requirements of NFPA 921, Mr. Hodges' testimony was tested against the physical evidence:

Q. So you - -

A. You don't have to sit in a laboratory and pour things from beaker to beaker to conduct testing. Comparative testing, etcetera, that is part of the normal investigative process. And I do that all the time and did it in this case, sir.

Q. So when you say testing then, you're really referring to you made this hypothesis and then you looked at all the evidence again?

A. Sure. It's a combative testing process, not a physical testing process, but it is testing nonetheless.

Q. And as a part of that testing process you evaluated all the different sources of data that you have listed here; is that right?

A. Sure.

Q. Why don't you just go through the reasoning that supports opinion number two for me?

A. Well, I think the reasoning is explained in opinion number two. I think of all the data that was collected as a result of the investigation into this matter by all parties that became part of this file, all of the data I believe indicates that the initiated of the event occurred outside the structure at the bag house.

I mentioned in there the rationale. I belief that the video of the incident from the security camera, which wasn't really a video of the incident, but it was a video of circumstances going on at the moment that this occurred at that specific location. I think that that shows, in my opinion, that the initial pop or the initial light burst, etcetera, occurred outside the building, not inside the building.

And there is only one eyewitness, which I mentioned in here, Mr. Hodges, who described the event at two locations in his deposition, the pages, etcetera, and lines are mentioned here, that he saw the fire ball coming at him from beyond the flame arrester or what he referred to as a flame arrester, which puts it outside the building

in the bag house.

There was not one bit of data in any of the other documents reviewed that contradicted that. **I mean I've read all the defense expert reports and they all discounted it. But nobody listed a fact or a piece of evidence that justified the elimination of that information. Why would you say the man didn't see what he saw?**

There wasn't any contradicted data whatsoever produced, other than to say, ah, he didn't see that so it didn't happen that way. You have an obligation to be a little more accurate than that, sir.

Ex. 13, p. 46-48 (emphasis added).

Mr. McGinley also considered whether the data supported the hypothesis that the explosion started in the ductwork:

Q. And that's the one where you say the ductwork, had the initial explosion occurred within the ductwork, you believe the ductwork would have been substantially deformed or words to that effect; is that right?

A. It would have been different than it was.

Q. Okay. It would have been blown up?

A. It would have been different. I have seen over-pressurizations many times. And I have read the other expert reports, etcetera. And I believe had this explosion occurred inside the ductwork --now, keep in mind, this has got to be an explosion of sufficient intensity to provide the blinding light that you saw on that video camera at the initiation that the defense experts are saying was occurring in the building which, by the way, nobody in the building noticed. That's okay.

If it had occurred, that kind of force in the ductwork, there is no way that ductwork survives in the condition it is. I have seen iron pipe explode and fished out far stronger environments than that sheet metal ductwork. That sheet metal ductwork wasn't even disfigured. I would have expected that at least it was going on the look like, you know, a soup can that's been on the shelf too long, bulged out.

When an explosion occurs, sir, you do not get single dimensional travel of energy. You get omni dimensional travel of energy. In my opinion, and I have seen enough explosions, there is no way that ductwork stays in that condition if the explosion that caused that light flash that I saw on that video occurred in that duct.

Ex. 13, p. 72-73.

Furthermore he carefully reevaluated his data upon receiving the reports of Defendants' experts:

Q. Have you gone back and re-evaluated your opinions and conclusions after reading Roby's report?

A. Certainly.

Q. And what have you - -

A. And reading all the other reports.

Q. And what have you - -

A. I have read all of them.

Q. And if you wouldn't interrupt, that would help with the transcript. But what have you concluded after re-reviewing your opinions and conclusions?

A. Having read their opinions and reviewing mine, I saw no need to change. I saw nothing in their reports that would make me want to alter my opinions whatsoever.

Ex. 13, p. 96.¹

B. METHODOLOGY OF MARTIN SCHLOSS, P.E.

The methodology utilized by Mr. Schloss is contained in section III of his expert witness disclosure report (**Ex. 16, p. 7-13**). Mr. Schloss reviewed the numerous documents listed in his report including post-explosion photographs of the scene, the deposition testimony taken in this case, the important specifications and design documents relating to the aluminum dust collection equipment which was collaboratively designed by the Defendants' F-M, Dustex, Carrington, and Kirk & Blum Company ("K&B") (**Ex. 20**), weather data from December 20-31, 2010 for Blacksburg, Virginia, video from a F-M surveillance camera at the plant, and

¹ Mr. McGinley also reevaluated his opinions upon receipt of an Affidavit from Richard Roby which has been filed by the defendants with the Court. **Ex. 15.**

photographs taken by Mr. Schloss at his site inspection in August 7, 2013. At his site inspection, in conjunction with the defense representatives participating, he examined the equipment debris including the Dustex baghouse and the K&B back blast damper, and among other things discussed in his report, he measured the overall dimensions of the explosion relief vent on the baghouse and examined the Brixon pressure release latches on the explosion relief vent with findings discussed in his report (**Ex. 16, p. 12**).

Discussing his methodology, Mr. Schloss states the following:

Initial review of post-explosion photographs revealed that the subject baghouse was quite literally blown apart. From my education, training and years of experience, I know that although baghouse explosions do often occur, the aftermath that was shown in the post-explosion photographs was quite unusual. I also know from my experience that it is well-accepted that injurious explosive forces of baghouse explosions should stay outside of the plant. That is a primary reason baghouses are installed exterior to a plant, as was the case at the Federal-Mogul plant in Blacksburg, Virginia.

Accordingly, these photographs and the injuries reportedly sustained by the workers on the interior cleaning the vent lead to two primary questions as to the supplied equipment. First, why was the baghouse destroyed by the forces of the explosion and second, how did explosive forces get into the interior of the plant so as to injure the Plaintiffs? I knew I would need to examine the subject baghouse, the process documents as supplied to the manufacturer and the design diagrams and test these against the standards set forth in NFPA 68, NFPA 69 and NFPA 484. Since properly designed and operating explosive venting should have prevented the baghouse from being blown apart and significantly reduced explosive forces direction up stream toward the interior of the plant, my working hypothesis as to the first question was that either the Brixon pressure release latches for the vent of the baghouse were improperly adjusted or otherwise inoperative, or the sizing of the vent was inadequate for the expected use.

Ex. 16, p. 11-12.

The methodology utilized by both experts according to the standards of NFPA 921, led to the following conclusions:

1. Both experts place the origin of the explosion in the baghouse after considering and eliminating all other potential hypotheses relating to the origin of the explosion;

2. Both experts identified potential ignition sources that could have been present and existed on the date of the explosion. Both experts identify exothermic reaction, which is known to occur in baghouses when condensation mixes with aluminum dust. In addition, Mr. McGinley identified a second potential ignition source, i.e. disturbance of the aluminum dust within the baghouse as a result of the vacuuming operation, creating an aluminum dust cloud which can then result in static discharges which can cause an explosion;
3. Mr. Schloss proves conclusively that the explosion venting on the baghouse designed, manufactured, and sold by Dustex to Federal-Mogul was inadequately sized, and was nearly one-half the size required by NFPA 68, and accordingly the baghouse was defectively designed and unreasonably dangerous for its ordinary and intended uses.
4. With regard to the back-blast damper manufactured and sold by Kirk & Blum and Carrington, Mr. Schloss found the back-blast damper to be defective and unreasonably dangerous for its ordinary and intended uses, including the particular use in this case because insufficient construction methods and materials not in accord with NFPA standards were utilized such that the back-blast damper could not withstand pressures. In particular, the back-blast damper utilized unreinforced eighteen gauge galvanized steel, and was also held together solely by spot welding as observed by Mr. Schloss' physical examination of the back-blast damper.

Ex. 16, p. 18-31.

5. As a result of these defects, it was the conclusion by Mr. Schloss that both of these explosion isolation control devices failed, and that, as a consequence of the failure of both devices, the fireball entered the plant building through the ducts causing the severe burn

injuries to the Plaintiffs.²

III. THE DEFENDANTS' ATTACKS ON THE CREDIBILITY OF EYEWITNESS JEFFREY HODGES, AS A BASIS FOR AN ATTACK ON THE OPINIONS OF THE PLAINTIFFS' EXPERTS, IS WITHOUT MERIT.

A. EYEWITNESS TESTIMONY OF JEFFREY HODGES

Jeffrey Hodges was an eyewitness to the origin of the fire. Hodges, who was looking down the duct with the aid of a flashlight (**Ex. 8, p. 40**), has testified unequivocally that the fireball came from "the baghouse end" of the duct.

There was a damper or backslash or whatever they come up with for the name of this thing. That was in the pipe and it was open because of the material that was in the pipe holding it open. I could see past that and into a curve in the pipe which went into the baghouse. I was standing there and at that time, from that end, from the baghouse end and past the damper, there was a flash of a fireball and the next thing I know I'm on fire. (Emphasis added)

Ex. 8, p. 40.

Q. So, you are looking all the way down this 16-inch pipe and you can see what you think is some sort of damper or flap?

A. Right.

Q. And it's your recollection that in a split second you saw that ignition beyond - -

A. It come from the very end past where that was at. To me it looked like a turn or an elbow or something in the pipe once it went outside and I could see to that point and that's where the flash or fireball came from, it came from there. (Emphasis added)

Ex. 8, p. 74-75.

² Mr. Schloss also reevaluated his opinions upon receipt of an Affidavit from Richard Roby which has been filed by the defendants with the Court. **Ex. 19.**

Defendants attack on the credibility of Hodges revolves around his testimony that he thought the flapper hinged “from the center” when it in fact hinged at the top. However, in making their attack on the credibility of witness Hodges as to the origin of the fireball, and for which they fault experts McGinley and Schloss for considering, Defendants omit and ignore that on the observation for which Mr. Hodges is faulted, he repeatedly stated that he did not know.

Q. Was it a flap with a hinge at the top?

A. **I don’t know.** I know that I could see the flapper that was in there and to me it looked like it pivoted from the center, **but I don’t know.**

Ex. 8, p. 101 (emphasis added).

On the other hand, as to the core dispositive testimony that Mr. Hodges saw the fireball “from the baghouse end” there was no equivocation. In fact, when further questioned he testified as follows:

Q. But you are clear in your mind that there was some fire that came from beyond this damper apparatus?

A. **Yes, absolutely.**

Ex. 8, p. 75 (emphasis added).

Defendants also seek to attack the credibility of eyewitness Hodges, and by extension, experts McGinley and Schloss, by suggesting that Hodges could not have seen light past the back blast damper because the flap was being held open by dust. However, this attack ignores Hodges testimony that the dust “varied through it all and went all the way back out to outside the building where there was a turn or something in the duct”. **Ex. 8, p. 40.** Further, although Dustex represents to the Court that witness McGinley “acknowledged that Hodges would not be able to see past the damper if it was closed” for the proposition that Mr. McGinley impermissibly considered Mr. Hodges’ testimony, this assertion is a distortion of the complete record. In fact,

Mr. McGinley testified to the opposite.

Q. How is it that if it's being blocked by a physical substance that you can't see through, you can somehow see beyond the flap and the physical substance?

A. Well, it would depend on the geometry of the physical substance. You could have a flap resting on accumulated material. There is no testimony or no information that this material was neatly falling into a pile of equal dimension on all sides. That pile of debris could have been, you know, like an EKG that one end of it was much higher than the other and that's the part that's holding, and there was a clear line of sight through there simply because of the air movement, etcetera when the duct was operating.

I mean who said, if we assume that it's a nice, flat, even surface of debris and that the flap is down on top of it, then what you're saying would probably be true. It would be very hard to see by it. But who could say that? I mean there was three inches of debris here there was and a half inch of it here and there was four inches of it there.

Q. Sir.

A. There was clearly varying geometries in the accumulated fines inside the ductwork and inside the flash work, flame arrester, whatever. So the man said he could clearly see past it. There is no evidence offered by anyone that says he couldn't.

Q. Let's just talk about what he is saying.

A. Okay.

Q. You have just agreed with me that the rectangular flap is larger than the cylindrical duct?

A. Correct.

Q. Now, if it is larger than the cylindrical duct and it's being propped open, he says he sees a pile of dust?

A. True.

Q. How is it that he sees beyond the dust? I just don't understand how you're seeing through it.

A. Again, it would depend on the geometry of the dust itself. You could have a pile of dust there that was not a nice, flat accumulation. You could have had the dust, like I said, with one side within the confines of the arrester. One side of it could

have been three inches higher than the other side.

There isn't any guarantee that it's going to fall in the same spot, especially when you have all that air moving through there. How do you know. The man said he could see past it. He described what it looked like past it. That sounds pretty good to me, sir.

Q. So you're saying that if there is a partial build-up on one side of the cylindrical duct, and there's - -

A. Build up was in the rectangular or square arrester. What was holding that duct or that flap up was not material in the duct, sir. It was in the arrester. So it wasn't in anything cylindrical. It was in a rectangular device or a square device.

Q. Thank you. But you're saying that if there is a little more on the left side, you might be able to see on the right side?

A. Sure. Could have been a lot more on one side than the other. The flap would get held up. Whether it's being held up by a pile that is the same dimension as the flap or whether it's being held up by a pile that is only on one dimension of the surface of the flame arrester, it would still be held up and your visibility would be dictated by how much open space was there.

Q. So are you saying that his description has the flap completely horizontal to the ground?

A. I'm not saying that his description is at all. What I'm saying is that the man was looking through the duct. He could see the flame arrester. He could see beyond the flame arrester. He made that crystal clear in his testimony. And his description is consistent with what was beyond.

So how he managed to do that with the accumulation that was there, we can sit here and speculate all day. The flap was being held up and he could see past it. I think that's what the facts are.

Now, exactly how it was held up or why it was in the configuration it was, we are never going to know that. We know that he wasn't seeing over the top of the flap because of his misunderstanding about the pivot point. But I believe that he could not have been more clear that he could see past that flame arrester and see the remainder of that ductwork, and his testimony was crystal on that.

Ex. 13, p. 66-70.

B. UNTRUE REPRESENTATIONS REGARDING STATEMENTS BY MR. HODGES

On brief, Dustex (and K&B and Carrington by incorporating Dustex arguments by reference) rely upon the alleged failure of McGinley and Schloss to consider what was incorrectly represented by Dustex to the Court on brief to be “inconsistent with testimony” by Hodges “provided right after the incident and prior to the lawsuit” that .. “while at the hospital, Hodges reported that the fire started in the ducts he was vacuuming.” *See*, Dustex Memorandum in Support of Motion to Exclude Expert Testimony, p. 5 (hereinafter referred to as “Exclude Memo p. ____”). Dustex’s path to this misstatement is its reference to the “Dustex Statement of Material Facts to Which There is No Genuine Issue, Number 51. Statement # 51, written by Dustex, claims that “Hodges stated that while cleaning out ductwork using a vacuum truck, aluminum dust ignited and caused an explosion” and cites Exhibit CC as a source. Exhibit CC is the Pre-Hospital Care Report for Jeffrey Hodges for “Incident Date – 12/31/2010”. Because the copy received on the Pacer system by Plaintiff was blurred and essentially unreadable, Plaintiff has included a true and accurate copy for the Court’s consideration. **Ex. 22.** This readable copy reveals that, contrary to the representation of Dustex on brief that Dustex Exhibit CC proves that “while at the hospital Hodges reported that the fire started in the ducts he was vacuuming,” the only statement regarding the occurrence was the “H” [History] which was “**subject was at work when aluminum dust ignited and caused an explosion.**” **This is not what was represented by Dustex and is entirely consistent with Hodges deposition testimony.** Even this History is not attributed to Mr. Hodges as can be seen by the blank entry under “History Primarily Obtained From:”.

Dustex also represented to the Court that “shortly thereafter, Hodges was interviewed by OSHA, and provided the same account.” *Id.* The Dustex path to this incorrect representation

was “Dustex Statement of Material Facts as to Which There is No Genuine Issue #63 which states: “Virginia Department of Labor and Industry, OSHA investigated the incident, interviewed Hodges and Bonds, and issued a citation to LCM on 2/25/11.” In support of this assertion, Dustex in turn cites Exhibit DD and Coordes deposition which is Exhibit Y (13:3-9) to Dustex Statement of Material Facts on Which There is No Genuine Issue. Exhibit DD is the Virginia Department of Labor and Industry citation directed to Plaintiffs’ employer LCM which was contested and is still subject to judicial determination. Nonetheless, Exhibit DD contains no such statement. As to the representation that Mr. Hodges provided the same account (i.e. that Hodges allegedly reported that the fire started in the ducts he was vacuuming), Dustex refers the Court to page 13, lines 3-9 of Exhibit Y. This deposition is under seal, but without reciting the context of the reference it goes no further than stating when Mr. Hodges was interviewed. However, interestingly in Mr. Coordes’ deposition, as to the very issue that Defendant Dustex misdirects the Court, there is an entirely consistent statement made by Mr. Hodges as to this issue which the Court can find in Mr. Coordes’ sealed deposition Defendant Dustex Exhibit Y at p. 18, L. 2-11.

IV. THE DISPOSITIVE ISSUE ON WHICH MR. MCGINLEY AND MR. SCHLOSS OPINE IS THE ORIGIN OF THE EXPLOSION IRRESPECTIVE OF THE PRECISE IDENTITY OF THE IGNITION SOURCE.

It is the origin of the explosion in the baghouse that implicates the role of the baghouse explosive vent and back-blast damper for their failure to do what they should have been designed to do – stop an over-pressurized fireball, regardless of the precise ignition source, from entering the building and burning people and property. The inherently dangerous nature of aluminum baghouses and the necessity of the prescribed explosion control devices is directly addressed by National Fire Protection Association standard (NFPA) 651 and NFPA 484:

Industry experience has clearly demonstrated that **an eventual explosion can be**

expected where a bag or media-type collector is used to collect aluminum fines.
Seldom, if ever, can the source of ignition be positively identified.

See, Exhibit B to Affidavit of Martin Schloss (**Ex. 18, Appendix C A-2-5.1**).

Mr. McGinley specifically addresses this on deposition as well:

And like I keep saying, the NFPA makes it crystal clear the vast majority of the times these explosions occur, the ignition mechanism is never identified, and that's in both 651 and 484.

Ex. 13, p. 171.

Accordingly, he appropriately limited his opinion as follows:

- A. I mean my opinions with regard to origin of the fire are I think firmly supported by the data. And my opinion that with regard to ignition mechanism is limited to possibilities because of the fact that these type of events are very, very difficult to identify with specificity an ignition mechanism.

Ex. 13, p. 117.

Despite extensive questioning by Defendants attempting to have him opine that exothermic reaction was the ignition source, Mr. McGinley repeatedly explained that exothermic reaction was one of a number of possible ignition sources in the baghouse.

- Q. All right. So is the exothermic combustion the only possible ignition source that you considered in developing your opinion?
- A. No, I just talked about potential of creating static with the movement of the particulate within the bag house itself, or whatever else causes these incidents that the NFPA says the ignition mechanism is unidentifiable.

Ex. 13, p. 121.

V. CONTRARY TO THE CLAIMS OF DUSTEX, THE TESTIMONY OF MR. SCHLOSS AND MR. MCGINLEY DIRECTLY IMPLICATE DUSTEX FROM A LIABILITY PERSPECTIVE.

On brief, Dustex claims that “the experts’ testimony fails to implicate Dustex”. This

assertion, which is also made by Dustex in its Memorandum in Support of Motion for Summary Judgment, is wrong for all the reasons set forth in Plaintiff's Memorandum in Opposition to Dustex's Motion for Summary Judgment which is incorporated by reference herein.

Dustex complains that it did not have the Kst value and asserts that "without knowing that value, Schloss agreed that Dustex did not have the basis upon which it could base a design" Exclude Memo p. 11. In this assertion, Dustex omits and ignores the role of Industry Standards in regard to its design responsibilities.

"In a products liability action based on allegations of defective design, a plaintiff must prove that a defect rendered the product unreasonably dangerous for foreseeable uses. *Dreisonstok v. Volkswagenwerk, A.G.*, 489 F.2d 1066, 1073, (4th Cir. 1974). A defective product is considered unreasonably dangerous **if it violates government or industry safety standards** or if it does not conform to consumers' reasonable expectations. *Alevromagiros v. Hechinger Co.*, 993 F.2d 417, 420 (4th Cir. 1993)."

Tunnell v. Ford Motor Company, 245 F. Appx. 283, 286 (2007) (emphasis added).

Chapter 7 of National Fire Protection Association ("NFPA") 68 (2002) provides the industry standards for venting of deflagrations of dusts and hybrid mixtures. *See*, Exhibit A to **Ex. 18**. Paragraph 7.1 provides that "this chapter applies to all enclosures handling combustible dusts or hybrid mixtures." *Id.* Dustex, on brief (Summary Judgment Memo p. 9) admits that it "knew that its baghouse would be used on an aluminum brushing system" and on deposition admits that Dustex knew that aluminum dust had explosive potential. **Ex. 5, p. 64**. Dustex also admits on brief (Summary Judgment Memo p. 2) that "the size of the blast door for the intended use of the baghouse is determined by the chemical characteristics of the aluminum dust, or its 'Kst value'" (emphasis added). The industry standard itself (NFPA 68 p. 68-50 Table E.1(d)), that Dustex should have consulted, explicitly provided the critical "Kst value" which Dustex admits it

should have had to calculate the safe size of explosive doors for an aluminum dust collection baghouse:

- Q. Okay. Is there a way that a manufacturer - - in the absence of the material actual testing, because the unit hasn't been built yet, is there a way that's provided under NFPA 68 to make a determination of how to safely design the unit?
- A. In NFPA 68 they have representative dust Kst's and Pmax's for different materials. Aluminum dust was one of those.
- Q. And what was the Kst?
- A. Kst was 415.
- Q. All right. And with that information that they had then, was Dustex in a position to manufacture a bag house then with the information that would be reasonably safe by taking into account the Kst value that's contained in the NFPA 68?
- A. Yes.
- Q. Okay.
- A. They would have an obligation to make sure that the design of their explosion vents met the requirements of the dust that they were producing.

Ex. 17, p. 228.

In its Motion to Exclude Expert Testimony, Dustex, as it did in its Memorandum in Support of Summary Judgment, asserts that Mr. McGinley's testimony that the injuries to the Plaintiffs would have occurred whether the origin was in the ductwork or the baghouse, means there is no basis for liability on the part of Dustex. However, Mr. McGinley's complete answer to the referenced question makes it clear that he was only speaking as to the system in its defective condition without reference to the protective devices (the issue of other experts) that should have prevented the fireball from entering the baghouse:

- Q. Isn't that a fair conclusion that the injuries to these gentlemen would have happened whether or not the origin was in the ductwork or it was in the baghouse?

- A. If all circumstances were the same, yeah, ultimately it's the fire coming out of the end of the pipe that's burning Mr. Hodges. **Now, whether or not that fire should have been able to get out through that pipe, is somebody else's argument.**

But like I said, with all things being equal, if the baghouse, if whatever protective characteristics, etcetera, were exactly what they were on that day, then this man was going to get burned whether the fire originated in the pipe or the baghouse provided, again, that we are using your hypothesis and we're extracting the key piece of data that he was standing there watching it.

Ex. 13, p. 131-132 (emphasis added).

Further, in its Motion to Exclude Expert Testimony, p. 11 Dustex, as it did in its Memorandum in Support of Summary Judgment, asserts that “according to Schloss, the size of the blast door had nothing to do with the cause of Plaintiffs’ injuries.” This assertion is also false. However, Dustex completely omits on brief, the pivotal facts addressed by Mr. Schloss that there was a back-blast damper between the over-pressurized baghouse and the Plaintiffs that failed to protect the Plaintiffs as a result of the combination of over-pressure from inadequate explosive venting and the structural insufficiency of the back-blast damper.

Earlier in this report, I addressed the first question I identified – why the baghouse was destroyed by the forces of the explosion, which was answered by the undersized venting that failed to meet the requirements of NFPA 68. I also addressed how the forces of the baghouse were permitted to enter the interior of the plant; that is as a combination of increased initial pressure that was caused by the under-sizing of the explosive vents and the failure of the back blast damper, as evidenced by photographs and inspection of the same, to stop the back blast. I also noted that the subject back blast damper was not compliant with NFPA 69 § 9.1.6.

Ex. 16, p. 25-26.

The contribution of the inadequate vent size was directly addressed by witness Schloss during his deposition.

Q. Okay. Why not?

A. Because the equipment - - the destruction of the equipment indicated that the - - in

the case of the dust collector, that the vent weren't properly - - or weren't large enough to release the vents, and the dust collector tore itself apart or had structural failure. In the case of the back blast damper, it structurally failed due to the pressures.

Ex. 17, p. 23.

This was supported by the physical evidence that was addressed on deposition by witness Schloss:

- Q. Was the blowing of the side - - not the flap, but the side blowing out on the backblast damper, was that a means of ventilation for this fire as well?
- A. Yeah. Whenever the pressure built up, it both tore the bag house apart and blew the back draft damper apart.
- Q. So it pushed out the side, but it did not - - but that same pressure did not have the effect of destroying the flap?
- A. It knocked the flap off the hinges at one point in the - -
- Q. Where?
- A. Hinges were not fastened all the way across the top of it. I think I have got a - - in this group of pictures.

Ex. 17, p. 129.

This is well illustrated by post explosion photographs.

- Q. And we have now marked as Exhibits 3 through 13 photographs that you took?
- A. These are photographs that I took in August. That's the hinge in question. You can see that it's not intact. You can also see it in this one - -

MR. BROWN: Say which one is this one.

BY MR. MORRIS:

- Q. That's why we have numbers.
- A. I'm sorry, Number 4. Number 5 you can see that it's offset and that the hinge - - the hinge has released, and this is out of the way. You can see the gaps around the blades. This is again - - Picture Number 6 is a picture of the unit.

Ex. 17, p. 130-131.

CONCLUSION

For the reasons stated herein, the plaintiffs respectfully request that the Motions previously filed herein by the defendants seeking to exclude the testimony of the plaintiffs' expert witnesses be denied.

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CERTIFICATE OF SERVICE

I hereby certify that on the 2nd day of January 2014, I electronically filed the foregoing with the Clerk of the Court using the CM/ECF system which will send notification of such filing to the following:

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